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SAFETY PRECAUTIONS

The rating plate and the safety caution are on the rear of the unit.

WARNING – DANGEROUS VOLTAGE INSIDE
WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

IMPORTANT (In the United Kingdom)
Mains Supply (240 V~, 50 Hz only)

IMPORTANT

Do not make any connection to the Larger Terminal coded E or Green. The wires in the mains lead are coloured in accordance with following code:

If these colours do not correspond with the terminal identifications of your plug, connect as follows:
Blue wire to terminal coded N (Neutral) or coloured Black.
Brown wire to terminal coded L (Live) or coloured Red.
If in doubt – consult a competent electrician.
Note
We recommend that you should disconnect the AC cord from the outlet.

FOR YOUR SAFETY (in Australia)
Install any external aerial to AS 1417.1

Omkopplaren BETRIEB på denna apparat är sekundärt kopplad och skiljer inte apparaten från nätet i läge BETRIEB OFF.

The BETRIEB button does not completely shut off mains power from the unit, but switches operating current on and off.

BEMAERK: I stilling OFF er apparatet stadig forbundet med lysnettet Hvis det ønskes fuldstændig afbrudt skal netledningen trækkes ud.

This unit is produced to comply with Directive 82/499/EEC.

CAUTION

- Disconnect the mains plug from the supply socket when not in use.
- When you are not using the HR-D210EG for a long period of time, it is recommended that you disconnect the power cord from the AC outlet.
- Dangerous voltage inside. Refer internal servicing to qualified service personnel. To prevent electric shock or fire hazard, remove the power cord from the AC outlet prior to connecting or disconnecting any signal lead or aerial.

VHS PAL HQ

- Only cassettes marked "VHS" can be used with this video cassette recorder.
- HQ VHS is compatible with existing VHS equipment.

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Printed in Japan

FEATURES

High-quality pictures

- **HQ (High Quality) System technologies** with a Detail Enhancer, and 20 % higher white clip level.

Advanced tape access features

- **VHS Index Search System** facilitates location of the beginning of each recording by automatically marking an index code on the control track of the tape; index codes can be detected in the Shuttle Search mode. This system is based on the newly standardised CTL coding system for VHS.
- Counter search for returning to a designated point on a tape.

Convenient automatic functions

- **Auto play function:** insert a cassette (with safety tab removed), and playback will start automatically.
- **Next-function memory** allows a command to be entered immediately after pressing RÜCKLAUF (or VORLAUF), with the second command "remembered" and performed automatically after the tape rewinds to its beginning or fast-forwards to the counter reading of "0000".
  - Memory play: for automatic start of playback.
  - Memory eject: to eject the cassette after rewind, without waiting for completion of rewind.
  - Memory timer standby: to engage the timer recording standby mode after rewind.
  - Memory power-off: to turn the power off after rewind.
- Automatic backspace editing.
- Auto-power-on convenience.
- Power-off ejection.
- Automatic rewind at the end of tape.

Other value features

- **Voltage synthesized wide-band cable tuner** with 48-channel preset capacity; can receive VHF, UHF and cable channels including those of hyper band.
- **Compatible with VPS (Video Programme System)** with built-in VPS decoder.
- **14-Day/4-event programmable timer.**
- **Overlapped programme warning:** programme numbers on the FDP blink when the preset time spans of the programmes overlap.
- **Timer programme review** to show the preset programme contents in the order of execution.
- **Infrared remote control.**
- **On-screen record-pause mode display** with elapsed time indicated by shrinking white bar.
- Electronic tracking controls.
- Instant timer recording function using the record button.
- **Shuttle Search with latch function:** with the Shuttle Search button locked or held depressed, offers high-speed playback at 9 times normal speed in either direction.
- Still and frame advance.
- Comprehensive fluorescent display.
- Elapsed recording time indicator.

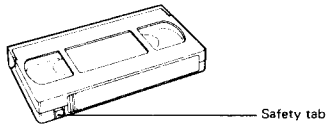
PRECAUTIONS

Handling and storage

- Avoid using the recorder under the following conditions:
  - extremely hot, cold or humid places,
  - dusty places,
  - near appliances generating strong magnetic fields,
  - places subject to vibrations, and
  - poorly ventilated places.
- Be careful of moisture condensation.
  Avoid using the recorder immediately after moving from a cold place to a warm place. The water vapour in warm air will condense on the still-cold video head drum and tape guides and may cause damage to the tape and the recorder.
- Handle the recorder carefully.
  - Do not block the ventilation openings.
  - Do not place anything heavy on the recorder.
  - Do not place anything which might spill and cause trouble on the top cover of the recorder.
  - Use in horizontal (flat) position only.
- In case of transportation,
  - Avoid violent shocks to the recorder during packing and transportation.
  - Before packing, be sure to remove the cassette from the recorder.

Video cassettes

- This recorder employs VHS-type cassettes only.
  E-240 for 4 hours, E-180 for 3 hours, E-120 for 2 hours, E-90 for 1 hour and 30 minutes, E-60 for 1 hour and E-30 for 30 minutes of recording.
- Video cassettes are equipped with a safety tab to prevent accidental erasure. When the tab is removed, recording cannot be performed. If you wish to record on a cassette whose tab has already been removed, use adhesive tape to block the hole.



- Avoid exposing the cassettes to direct sunlight. Keep them away from heaters.
- Avoid extreme humidity, violent vibrations or shocks, strong magnetic fields (near a motor, transformer or magnet) and dusty places.
- Place the cassettes in cassette cases and position vertically.

Moisture condensation

- If you pour a cold liquid into a glass, water vapour in the air will condense on the surface of the glass. This is called moisture condensation.
- Moisture condensation on the head drum, one of the most crucial parts of the video recorder, will cause damage to the tape.
- Moisture condensation is apt to occur under the following conditions:
  - when the recorder is moved from a cold place to a warm place, and
  - under extremely humid conditions.
- In conditions where moisture condensation may occur, keep the power cord plugged in an AC outlet and the BETRIEB switch set to ON; this would help prevent condensation from occurring. When condensation has occurred, it will not evaporate quickly once the power is switched on. Wait a few hours for the recorder to become dry.

Operation

- When a cassette is loaded, the power is switched on automatically.
- The cassette can be unloaded even when the power is off. Pressing the KASSETTE button turns the power on and, after ejection of the cassette, shuts it off automatically in this case.
- As long as the SCHALTUHR button is engaged with the TIMER indicator lit, the BETRIEB and KASSETTE buttons have no effect and unloading of a cassette is not possible. If a cassette has not yet been inserted, simply insert a cassette; the power will be switched on to load the cassette properly and, after completion of automatic loading, the Timer Recording Standby mode will be engaged with power off.

Remote control unit

- Avoid violent shocks, especially take care not to drop the unit.
- Take care not to allow liquid to spill into the unit.
- Do not place heavy objects on the unit.
- Avoid leaving the unit in places subject to direct sunlight or extremely high temperatures.

WARNING

1. This recorder can also receive colour television signals in East Germany (DDR) for recording and playback.
2. Recordings made of DDR television signals produce monochrome pictures if played back on another video recorder of PAL or SECAM standard.
3. SECAM prerecorded cassettes or recordings made with a SECAM video recorder produce monochrome pictures when played back with this recorder.
4. This recorder cannot be used in France. Use a SECAM recorder to record French SECAM signals.

CONTROLS, INDICATORS AND CONNECTORS

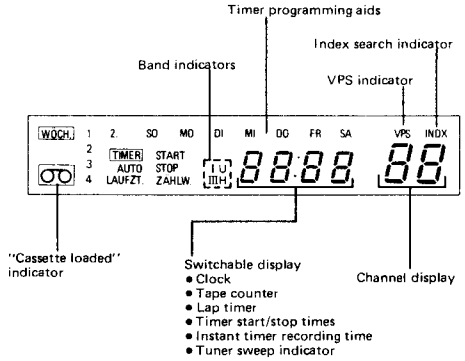
Refer to the diagrams on the front foldout page.

Front Panel

❶ Infrared beam receiving window (FERNB. SENSOR)

❷ Cassette loading slot
Insert a VHS cassette. The door will close and the "cassette loaded" indicator will appear on the FDP (fluorescent display panel).

❸ Fluorescent display panel
Fully explained in relevant sections.



❹ Counter reset button (ZÄHLWERK-RÜCKST.)
Press to reset the counter reading or lap time to "0000" or "0 : 00" respectively.

❺ Clock/Counter/Lap button (UHR/ZÄHLW./LAUFZT.)
Press to switch the display among clock, tape counter (ZÄHLW.) and lap time (LAUFZT.). Also used to change the display from the timer programming mode to the clock mode.

❻ Operate button (BETRIEB) with LED indicator
Press to apply operating power to the recorder. The indicator will light. Loading a cassette also turns the power on.

❼ Cassette eject button (KASSETTE)

❽ STOP button
Press to stop the tape.

❾ Play button (WIEDERGABE) with LED indicator
Press to play back the tape or cancel the Pause/Still and Search modes.

❿ Record/Instant timer record button (AUFN. DA) with LED indicator
Press once to start recording. Pressing it again engages the Instant Timer Recording mode. See page 23.

⓫ Pause/Still button (PAUSE/STANDB.) with LED indicator
Press to stop the tape temporarily to avoid recording of unwanted material or to view a still picture. The still picture can be advanced step by step or continuously.

⓬ Rewind and Fast-Forward (Shuttle Search) buttons (RÜCKLAUF and VORLAUF) (BILDSUCHLAUF)
Press while in the Stop mode to rewind or fast-forward the tape; press while in the Play mode to view the speeded-up picture for programme search. See pages 22 and 24.

⓭ AFC switch
Normally set to AUS. If reception of a broadcast programme is substandard, set it to EIN.

⓮ Tape memory switch (ZIELSUCHLAUF)
ZÄHLWERK: The tape will stop automatically at the counter reading of about "0000" in the Rewind or Fast Forward mode. See page 24.
INDEX: The index code marked at the beginning of each recording will be detected in the Shuttle Search mode for automatic start of playback. See page 24.
AUS: Set to AUS if you are not going to use either of the two functions.

⓯ Tracking -/+ buttons (SPURLAGE)
Press either button to minimise noise bars, if observed, during playback.

⓰ TV programme -/+ buttons (TV-PROGRAMM)
Press either button to select a desired channel.

⓱ VPS/Channel set button (VPS/KANALEINSTELLUNG)
A dual-function switch. Serves as a VPS command enter button in timer programming (see page 26). Normally functions to engage or disengage the tuner preset mode (see page 21).

⓲ Clock adjust button (UHREINSTELLUNG)
Press to adjust the clock.

⓳ Programme button (AUFZ. NR.)
Press to programme the timer.

⓴ Select button (VORWAHL)
Press to select the band in tuner presetting; press to select the item to be set in clock setting or timer programming.

㉑ Channel search/Set -/+ buttons (KANAL SUCHLAUF/EINGABE)
Press to search for broadcast programmes in tuner presetting; press to set to the correct data in clock setting or timer programming.

㉒ Store/Repeat button (SPEICHERN/WIEDERHOL.)
Press to store the tuned-in channel in tuner presetting; press to enter the repeat command in timer programming.

㉓ Skip/Cancel button (ÜBERSPRINGEN/LÖSCHEN)
Press to skip unnecessary channels in tuner presetting; press to cancel the preset programme in timer programming.

㉔ Timer button (SCHALTUHR)
Press to engage the timer recording standby mode.

Remote Control Unit

㉕ Operate button (BETRIEB)
Press to turn the recorder power on or off.

㉖ TV PR. -/+ buttons
Press either button to select a desired channel.

㉗ Play button (WIEDERG.)

㉘ Pause/Still button (PAUSE/STANDB.)

㉙ STOP button

㉚ Rewind and Fast-Forward (Shuttle Search) buttons (RÜCKL. and VORL.) (BILDSUCHLAUF)

㉛ Record button (AUFNAHME)
Press together with the WIEDERG. button to start recording.

Operating distance for remote control unit
- The maximum operating distance is about 8 m.

Installing the batteries
- Insert two "R6"-size batteries (provided) into the battery compartment on the rear of the remote control unit, observing correct polarity.

Rear Panel

❼ **Aerial input connector (ANTENNEN-EINGANG)**
Connect an aerial to this connector.

❽ **TEST signal switch**
Set to EIN when tuning your TV receiver for the video channel. A test signal in the form of two vertical white bars will be available.

❾ **Vertical lock adjustment screw (V-BILDFANG)**
When operating in the Still mode, adjust this screw to eliminate any vertical vibration of the picture. (For any inquiry about this adjustment, contact a JVC dealer.)

❿ **AUDIO/VIDEO socket**
A 21-pin standardised audio/video input/output socket for the connection to a TV or a 2nd video recorder equipped with the same type of socket. The input from this socket can be recorded in the AUX mode engaged by obtaining "AU" in the channel display.

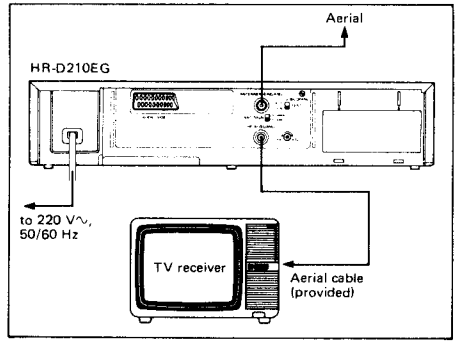
⓫ **RF output connector (HF-AUSGANG)**
Connect to the aerial terminal of a TV receiver through the aerial cable (provided).

⓬ **RF converter frequency adjustment screw**

⓭ **Attenuator switch (ANT. SIGN.)**
Set to SCHWACH to receive broadcasts from distant stations. Set to STARK to receive broadcasts of high field strength.

⓮ **Power cord**

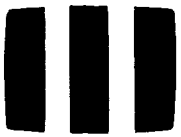
CONNECTIONS



1. Remove the aerial cable from the TV receiver and reconnect it to the recorder's ANTENNEN-EINGANG ⓬ connector. The recorder is then ready to record off-air programmes.
2. Connect the recorder's HF-AUSGANG connector ⓫ to the TV receiver's aerial terminal using the provided aerial cable. The TV receiver is then ready to receive broadcast programmes as well as accommodate video cassette playback.

VIDEO CHANNEL SETTING

1 Press the BETRIEB button ❻ to turn the power on. Turn on the TV receiver.
2 Set the TEST switch ❽ to EIN.
3 Adjust your TV receiver in the vicinity of UHF channel 36 until you bring in the two white signal bars on the screen as illustrated. This is your VIDEO CHANNEL.

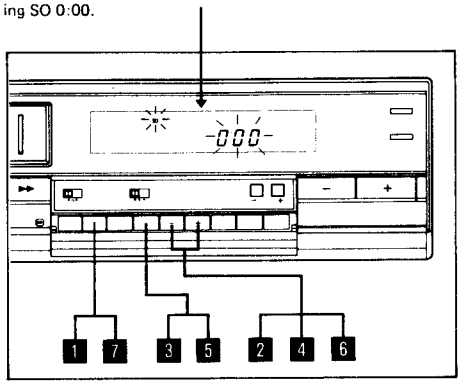


4 Reset the TEST switch to AUS.

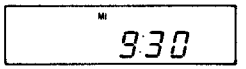
Notes:
- If some interference noise is seen on the screen because of broadcasts on neighbouring channels or if your preset broadcasts should be affected in picture quality, it is necessary to shift the RF converter output frequency from that of channel 36. Consult your JVC dealer for making this adjustment.
- Video channel setting is also possible using a prerecorded VHS video cassette. Play back the tape and tune the TV receiver to obtain clear pictures and sound while monitoring the playback picture on the TV screen.
- If your TV receiver is not provided with an AFC circuit, perform fine tuning of the TV receiver when you are actually viewing video cassettes.

CLOCK SETTING

Plug the recorder into an AC outlet. The display shows a blinking SO 0:00.



1 Press UHREINSTELLUNG ❺. The indicated day will blink.
2 Press EINGABE ❸ until the correct day indication appears.
3 Press VORWAHL ❹. The indicated hour digits will blink.
4 Press EINGABE until the correct hour indication appears.
5 Press VORWAHL. The indicated minute digits will blink.
6 Press EINGABE until the correct minute indication appears.
7 Press UHREINSTELLUNG at the exact instant of the time signal and clock will be set accurately to the present time.

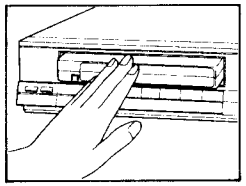


Power failure indicator
The blinking SO 0:00 (initial condition of the display) is also a power failure indicator, showing that there has been a power failure exceeding 10 seconds. Re-adjusting the time restores the normal condition of the clock display.

Note:
- Clock setting is not possible in the timer recording standby mode. First check to see that the TIMER indicator on the FDP is not lit.

LOADING AND UNLOADING A CASSETTE

Loading
Insert a cassette as illustrated. Be sure to insert it firmly into the slot; otherwise, it will be automatically ejected.



- The automatic loading mechanism will operate only when the cassette is inserted correctly.
- With a cassette inserted, the "cassette loaded" indicator will appear on the FDP.

Unloading
Press the KASSETTE button ❼.

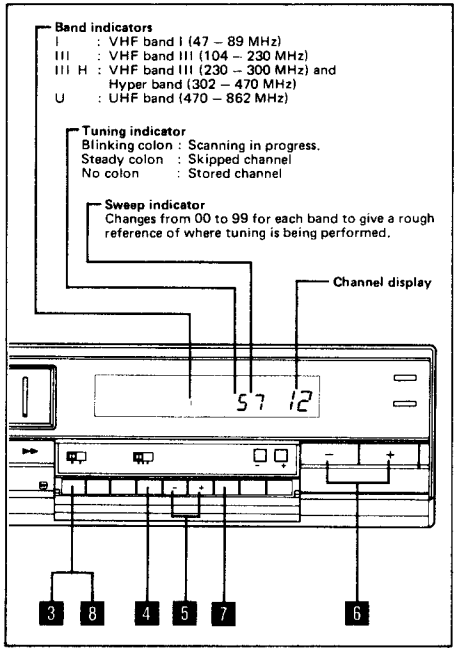
CAUTION
- If unloading of the cassette is not possible, check to see whether the TIMER indicator is lit. If so, press the SCHALTUHR button so the TIMER indicator extinguishes.
- Do not attempt to pull out the cassette once automatic loading has started.
- Do not insert fingers or any foreign object beyond the door of the cassette loading slot, as this could lead to injury or damage to the mechanism. Show special caution with children.

AUTO POWER-ON AND AUTO PLAY SYSTEM
- The cassette can be loaded even when the power has not been turned on. Inserting a cassette into the loading slot turns the power on automatically.
- Inserting a cassette, with its safety tab removed, turns the recorder on and playback of the cassette begins automatically.

POWER-OFF EJECT SYSTEM
- The cassette can be unloaded even after the power has been turned off. Pressing the KASSETTE button turns the power on automatically and, after ejection of the cassette, shuts it off automatically.

OPERATING THE BUILT-IN TUNER

The HR-D210EG incorporates a voltage synthesized tuner with 48-channel preset capacity. Only channels stored can be called up with the TV-PROGRAMM buttons in modes other than Channel Set. In the Channel Set mode, all channel numbers including skipped ones are successively displayed so that they can be stored or skipped.


Band indicators
I : VHF band I (47 – 89 MHz)
III : VHF band III (104 – 230 MHz)
III H : VHF band III (230 – 300 MHz) and Hyper band (302 – 470 MHz)
U : UHF band (470 – 862 MHz)
Tuning indicator
Blinking colon : Scanning in progress.
Steady colon : Skipped channel
No colon : Stored channel
Sweep indicator
Changes from 00 to 99 for each band to give a rough reference of where tuning is being performed.
Channel display
57 12
3 8 4 5 7 6

Available channels in each band

Band indicator	Frequency	Channels
I	VHF band I (47 – 89 MHz)	E2 – E4 (Common European channels) X, Y, Z (Switzerland) A, B, C (Italy) S1 – S3 (Belgium)
III	VHF band III (104 – 230 MHz)	E5 – E12 (Common European channels) S1 – S10 (West Germany, Switzerland) D, E, F, G, H (Italy) M1 – M10, 80 – 89 (Belgium)
III H	VHF band III (230 – 300 MHz) Hyper band (302 – 470 MHz)	S11 – S41 (West Germany) U1 – U10, 90 – 99 (Belgium)
U	UHF band (470 – 862 MHz)	E21 – E69 (Common European channels)

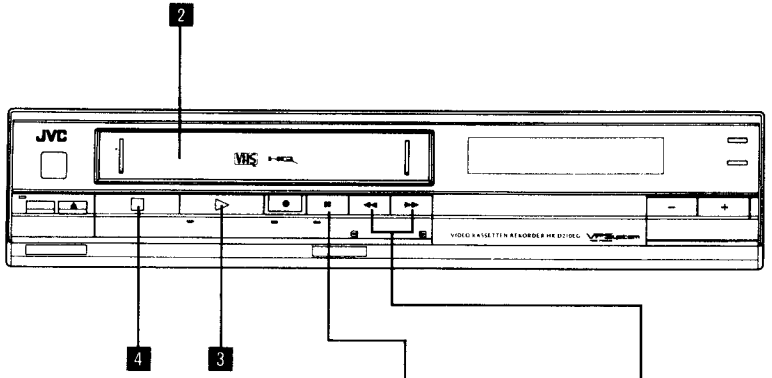
Storing channels

1. Turn on the TV receiver and adjust it to your video channel.
2. Turn on the recorder.
3. Press KANALEINSTELLUNG ⓯.
4. Press VORWAHL ⓴ until the correct band indication appears.
5. Press KANAL SUCHLAUF ㉑ until the desired broadcast signal is detected; use either the "-" or "+" button depending on the direction of search.
   - The tuning indicator "colon" will blink and the sweep indicator will count down or up.
6. Press TV-PROGRAMM ⓰ to select the channel to be stored.
7. Press SPEICHERN ㉒. The "colon" will disappear.
   - Repeat steps 4 through 7 for all necessary channels.
8. Press KANALEINSTELLUNG to disengage the Channel Set mode.

Skipping channels

1. Press TV-PROGRAMM to select the channel to be skipped.
2. Press KANALEINSTELLUNG.
   - The band indicator and the sweep indicator corresponding to the broadcast stored in that channel will appear.
3. Press ÜBERSPRINGEN ㉓. The steady "colon" will appear.
4. Press KANALEINSTELLUNG to disengage the Channel Set mode.

PLAYING BACK A VIDEO CASSETTE



1. Turn the TV receiver on and adjust it to your video channel.
2. Load a pre-recorded cassette.
   - Power will be switched on automatically.
   - When the cassette loaded has no safety tab, playback will start automatically.
3. Press WIEDERGABE ❾.
4. Press STOP ❽ at the end of the programme.
   - The tape will be rewound automatically when its end is reached and the recorder will enter the Stop mode.

SHUTTLE SEARCH

Shuttle Search allows high-speed playback at 9 times normal speed in either direction.

1. Press either RÜCKLAUF or VORLAUF BILDSUCHLAUF ⓱ during playback.
2. To cancel the Search mode, press WIEDERGABE.
   - For briefer scanning, keep the BILDSUCHLAUF button pressed for more than 2 seconds; when you release the button, the Search mode will be cancelled.

STILL PICTURE

1. Press PAUSE/STANDB. ⓫ during playback.
2. To advance the still picture, press PAUSE/STANDB. a number of times.
   - Keeping this button pressed continuously advances the picture to give a slow-motion effect.
3. To cancel the Still mode, press WIEDERGABE.

Notes:

- When the Still mode continues for longer than about 5 minutes, the Stop mode will be entered automatically.
- With some televisions, the still picture may be unstable. This is not due to any defect of the unit.

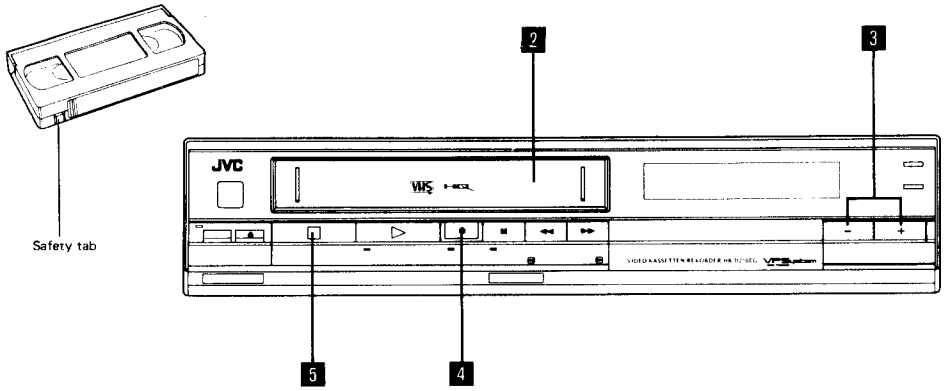
Tracking Adjustment

Noise bars may appear on the screen if you play back a tape which was recorded using another recorder. For correction, press either SPURLAGE control ⓭. Tracking will be reset to the preset standard each time the cassette is ejected.

Note:

Only SP (Standard Play) recordings can be played back.

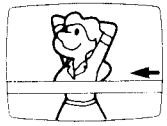
RECORDING TV PROGRAMMES



1 Turn the TV receiver on and adjust it to your video channel.
2 Load a cassette (with safety tab in place).
- Power will be switched on automatically.

3 Press either TV-PROGRAMM ⑯ to select the channel you wish to record.
4 Press AUFN./DA ⑩ to start recording.
- Be careful to press AUFN./DA only once, or Instant Timer Recording will begin.
- Press AUFN. and WIEDERGABE simultaneously when using the remote control unit.
- If there is part of the programme you don't want to record, press PAUSE/STANDB. ⑪. A white horizontal bar will appear on the screen, which reduces in size in 4 steps as time elapses. When the last quarter starts blinking and disappears, the Stop mode will be entered automatically. The pause duration is possible for about 5 minutes.

Pause mode indicator



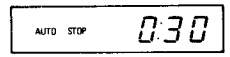
- To continue recording from the Pause mode, press WIEDERGABE ⑨ while the white bar is on-screen.

5 Press STOP ⑧ at the end of the programme.
- When the end of the tape is reached during recording, the tape is automatically rewound and stops.

Notes:
- If you want to start recording from the Play mode, first engage the Record-Pause mode by pressing PAUSE/STANDB., and then AUFN./DA. Then press WIEDERGABE.
- When recording is restarted from the Pause mode, a few frames recorded before are erased due to overlap of the new recording. This is not due to any defect of the unit.
- The selected channel cannot be altered during recording. If you wish to change the channel, first engage the Pause mode and then select a different channel.

INSTANT TIMER RECORDING

If you wish for recording to stop automatically after a certain period of time, use this Instant Timer Recording mode.

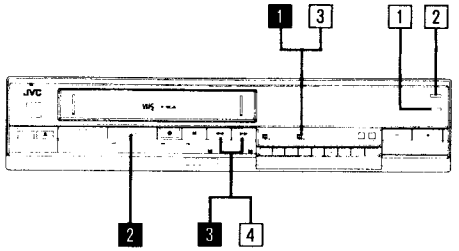


1. Press AUFN./DA during recording (or twice if in the Stop mode).
   - The FDP shows "AUTO STOP 0:30", showing that recording will automatically stop and power will switch off after 30 minutes.
2. Adjust the switch-off time, if necessary.
   - Press AUFN./DA to increase it in 30-minute increments (possible up to 4 hours).
   - Use VORWAHL and EINGABE to set to a more precise time when required (possible up to 4 hours 59 minutes). After setting the time, press VORWAHL so that all digits stop blinking.

RECORDING ONE PROGRAMME WHILE WATCHING ANOTHER

A programme not being viewed can be recorded while you enjoy another programme.
- Select the channel you wish to record with the recorder's TV-PROGRAMM buttons.
- Select the channel you wish to view with the TV receiver's channel selector.

INDEX SEARCH AND COUNTER SEARCH



VHS Index Search System

When you start recording from the Stop, or Timer Standby mode, an index code is marked on the tape. These index codes can be detected in the Shuttle Search mode.

1 Set ZIELSUCHLAUF ⑫ to INDEX.
2 Press WIEDERGABE ⑨ to start playback.
3 Press RÜCKLAUF or VORLAUF BILDSUCHLAUF ⑫ depending on the direction of search.
- While the tape is being scanned, "INDX" will be displayed on the FDP.

4 When the first index code is detected, normal playback resumes automatically. To search for the next index code, press the same button once again.

Counter Search

The counter reading of "0000" can be located automatically.

[1] Press UHR/ZÄHLW./LAUFZT. ⑤ to obtain the Counter mode.
[2] Press ZÄHLWERK-RÜCKST. ④ during playback or recording at a point which you wish to locate later.
[3] Set ZIELSUCHLAUF to ZÄHLWERK.
[4] Press RÜCKLAUF or VORLAUF when you need to return to the designated point.
- The tape will stop automatically at about "0000".
- When used in conjunction with the Memory Play function, this offers more convenience. See below.

ELAPSED RECORDING TIME INDICATOR

The tape counter is switchable to the elapsed recording time indicator.

1. Press UHR/ZÄHLW./LAUFZT. to obtain the Lap mode.
   - The lap time is counted up to 9 hours 59 minutes.
2. To reset the lap time to "0 :00", press ZÄHLWERK-RÜCKST.

Notes:
- Unless the ZÄHLWERK-RÜCKST. button is pressed in the Lap mode, the count is maintained even after the power is switched off (as long as the unit remains plugged in to an AC outlet).
- When the Lap mode is engaged during playback, counting does not take place, even though the current count is displayed.

NEXT-FUNCTION MEMORY

Memory Play function

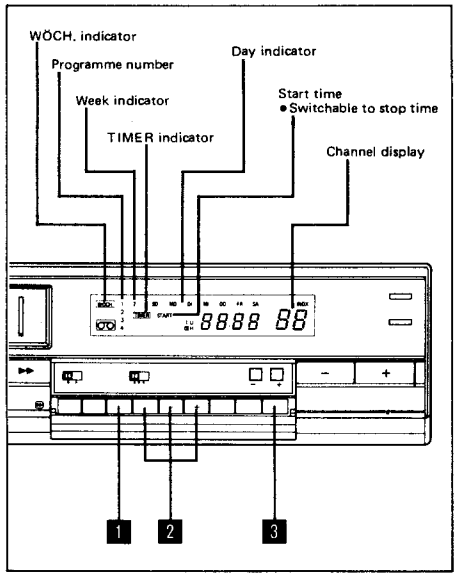
- If you want to watch the tape from its beginning after rewinding, press RÜCKLAUF and then WIEDERGABE within 2 seconds. Playback will start automatically at the beginning of the tape. (The ZIELSUCHLAUF switch must be in the AUS position.)
- If you want to watch the tape from the counter reading of "0000", set ZIELSUCHLAUF to ZÄHLWERK, press RÜCKLAUF (or VORLAUF) and then WIEDERGABE within 2 seconds.

Memory Eject/Power-Off/Timer Standby

If you are going to eject the cassette, turn the power off or engage the Timer Standby mode after rewinding the tape, you do not have to wait for completion of rewind to press the corresponding button.
- To eject the cassette after rewind, press RÜCKLAUF and then KASSETTE within 2 seconds.
- To turn the power off after rewind, press RÜCKLAUF and then BETRIEB within 2 seconds.
- To engage the Timer Standby mode after rewind, press RÜCKLAUF and then SCHALTUHR within 2 seconds.

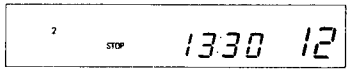
AUTOMATIC TIMER RECORDING

First of all, load a cassette (with safety tab in place); power will be switched on automatically.



1 Press AUFZ. NR. ⑱.
- The display will change to the Timer Set mode for programme number "1". To advance to programme number 2, 3 or 4, press AUFZ. NR.

2 Set the day, start time, channel and stop time in succession by using the VORWAHL and EINGABE buttons ⑳ ㉑ alternately.
- Select the item to be set with the VORWAHL button; the selected item will blink.
- Set the desired data with the EINGABE buttons.



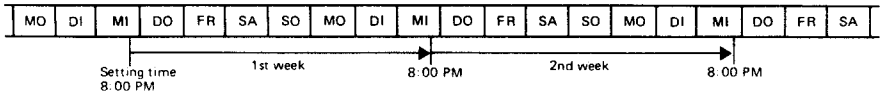
Setting the day
- With the EINGABE "+" button, the day indication advances from "SO" (first Sunday) to "SA" (first Saturday), then "2. SO" (second Sunday) to "2. SA" (second Saturday) and then the all-days indication with "WÖCH." for daily serial recording.
- For weekly serial recording, press the WIEDERHOL. button any time in the Timer Set mode.
- The "WOCH." entry can be cancelled by pressing the WIEDERHOL. button.

Setting the start and stop times
- It is not possible to set the start and stop times unless the clock has previously been set.
- Enter the data while the digits are blinking.
- The stop time can be set within 24 hours from the start time.

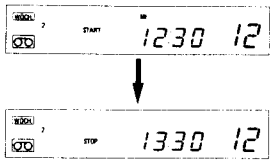
Cancelling the preset data
- The preset programmes can be cancelled. First engage the Timer Set mode for the programme number you wish to cancel and then press the LÖSCHEN ㉒ button.

3 After making sure that the cassette is loaded, press SCHALTUHR ㉔.
- The Timer Recording Standby mode will be engaged with the TIMER indicator and the preset programme number(s) illuminated and the power turned off.
- With no cassette loaded, the TIMER and "cassette loaded" indicators will continue blinking.
- A cassette whose safety tab has been removed will be ejected automatically.
- If a preset programme contains errors, that programme number will not be illuminated. Recheck the programmed data.
- If illuminated programme numbers are blinking, the time spans of those programmes overlap. Recheck their programmed data.

Note:
- The 1st week refers to the seven-day period from the present day and the 2nd week, to the following seven-day period (not weeks on the calendar). These two weeks are counted from the time of setting.



Reviewing the programmed data
- Press the AUFZ. NR. button in the Timer Standby mode; the programmed data of the earliest-to-start programme will be shown for 6 seconds (3 seconds for START and 3 seconds for STOP) and then those of subsequent programmes, if any, in the same manner.

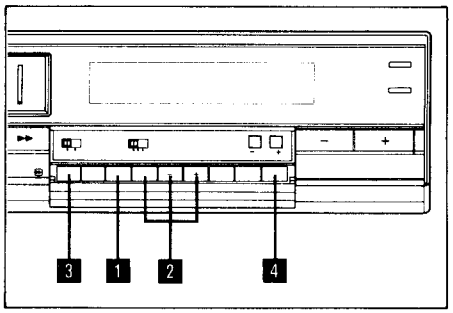


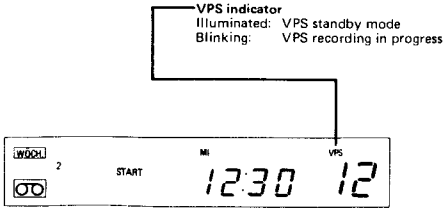
- If you wish to change the programmed data, engage the Timer Set mode (first press the SCHALTUHR button to disengage the Timer Standby mode and then press the AUFZ. NR. button) and call up the corresponding programme number for reprogramming.

Timer recording operation
- When the preset start time is reached, recording starts.
- After timer recording, the power is switched off. If the tape end is reached during timer recording, the cassette is automatically ejected and the power is switched off.
- After all preset programmes have been executed, the Timer Standby mode is cancelled.

VPS RECORDING

In the VPS (Video Programme System) system, TV stations transmit different VPS codes for different TV programmes, which control the starting and stopping of the video recorder and have precedence over times preset in the timer for accurate recording of a particular programme from start to finish.





1 Press AUFZ. NR. ⑱.
2 Set the day, start time, stop time and channel in the same way as for timer programming.
3 Press VPS ⑰.
- All timer data will be converted to VPS codes and stored in memory.

4 Press SCHALTUHR ㉔.
- If the preset start time is between 4:00 and 23:59, the recorder will enter the VPS standby mode at 0:00 on the preset day and remain engaged until 4:00 on the following day, if the intended programme has not yet been broadcast.
- If the preset start time is between 0:00 and 3:59, the recorder will enter the VPS standby mode at 20:00 on the previous day.
- When a VPS code corresponding to the intended TV programme is detected during the VPS standby mode, recording will start. When the VPS code changes to another, recording will stop.
- When an interruption code is detected during VPS recording, the VPS standby mode is engaged and recording restarts when the regular VPS code is restored.

Notes:
- If no VPS code is detected from that station or a system status code which cancels VPS recording is detected, ordinary timer recording will be engaged.
- Operation at the end of VPS recording is the same as with ordinary timer recording.

RECORDING FROM AN EXTERNAL SOURCE

By connecting an external video source (such as a VideoMovie camera-recorder, 2nd video recorder, video camera, etc.) to the AUDIO/VIDEO socket, recording and/or editing are possible.

- For connection of these units, an appropriate cable is necessary.
- For connection of a video camera, a camera adapter is also necessary. Consult a JVC dealer.

1. Turn the power on for all connected equipment.
2. Adjust the TV receiver to your video channel.
3. Load a cassette.
4. Press either TV-PROGRAMM button ❼ to obtain "AU" in the channel display.
5. Operate the source equipment properly.
6. Press AUFN./DA ❽.
7. To stop recording temporarily, press PAUSE/STANDB. ❾.
8. To end recording, press STOP ❽.

Note:

- For the operation of the source equipment, refer to the instruction manual of the relevant machine.

IN CASE OF DIFFICULTY

What may initially appear to be trouble is not always a real problem. Make sure first . . . .

Symptoms	Check points
No power is applied to the recorder.	• Is the power cord disconnected? Connect it.
Playback picture does not appear while the tape is running.	• Is the TV receiver's channel selector set to the correct video channel? Set to the RF converter channel.
Tape does not run in the Record mode.	• Is the PAUSE/STADB. button pressed? Press WIEDERGABE to release.
AUFN./DA button cannot be engaged.	• Is the cassette improperly loaded? Load it properly. • Is the safety tab broken? Reseal the slot.
Tape stops in the Rewind or Fast Forward mode.	• Is the ZIELSUCHLAUF switch set to ZÄHLWERK? Set to AUS.
Tape will not rewind.	• Is the tape already rewound to the end?
Noisy playback picture.	• Adjust with the SPURLAGE controls.
Pressing PAUSE/STANDB. during playback brings a still picture (in a frame-by-frame manner) with noise bars.	• Noise bars can be eliminated by pressing the PAUSE/STANDB. button a few more times.

This recorder contains microcomputers. External electronic noise or interference could cause malfunctioning. In such cases, switch the power off and unplug the power cord. Then plug it in again and check the functions.

HEAD CLEANING

- Picture playback may become blurred or interrupted while the TV programme received is clear. This does not mean that the recorded programme has been erased.
- Dirt accumulated on the video heads after long periods of use causes such problems. In this case, head cleaning requiring highly technical care is necessary.

For head cleaning, consult the nearest JVC dealer.